SMET Wind Speed Calibration Check (CALC)

I. Purpose:

The purpose of this procedure is to describe the steps performed by the RESET team for checking the calibration of the wind speed sensors at ARCS. **Note: this procedure is performed as part of the SMET logger calibration procedure PRO(DAQM)-005.**

II. Cautions and Hazards:

- If the wind speed sensor is brought down from the wind tower; at least two trained persons are required and take care not to be struck by the tower or weighted mount.
- Perform this procedure during each RESET team visit to the ARCS sites.
- Do not perform this procedure if lightning is observed or expected.

III. Requirements:

- Drive motor with rpm display

IV. Procedure:

A. Steps:

1. Observe propeller motion of the anemometers on the tower.
2. If the motion is irregular, lower tower and replace the anemometer.
3. Otherwise, attach drive motor.
4. Compare datalogger output wind speed in Hz using the TEST MENU with three rpm settings (wind speed = 0.0049 rpm).
5. If speeds agree within +/-5 %, log difference and return anemometer to tower.
6. Otherwise, contact mentor and replace anemometer if necessary.
7. If replaced, repeat steps above.

V. References:

1. Hart, R.: "Element Operations and Maintenance Procedure Development Outline," Argonne National Laboratory," 1995.
2. R. M. Young Company: "Wind System Calibration," 1994.

VI. Attachments:

None.